

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended):     ~~Addressing~~ An addressing scheme intended to be used in an IP-based Radio Access Network, said Radio Access Network comprising:

        a plurality of base stations; ~~and~~

        at least one base station controller, wherein said plurality of base stations and said at least one base station controller all communicating-communicate with each other by using one of an-a TCP/IP-based protocol stack ~~or-and~~ a UDP/IP-based protocol stack; and

a plurality of radio terminals;

wherein:

                each of said base stations ~~being~~ is adapted to communicate with ~~a-the~~ plurality of radio terminals having access to said Radio Access Network over at least two different types of radio channels,

wherein in said addressing scheme, ~~being characterized in that~~ the type of radio channel over which said base station communicates with one of said radio terminals is implicitly and univocally determined by a port number ~~mentioned~~ identified in each TCP or UDP data packet exchanged over said Radio Access Network and belonging to a communication with said radio terminal.

2. (currently amended): ~~Addressing~~ The addressing scheme according to claim 1, ~~characterized wherein~~ in each of said radio channel types is associated to at least one of said port numbers available at a base station or at a base station controller of said Radio Access Network.

3. (currently amended): ~~Addressing~~ The addressing scheme according to claim 1, ~~characterized in that wherein~~ said IP-based protocol stack used in said IP-based Radio Access Network comprises UDP/IP combination, the UDP destination port number in said ~~UDP-UDP~~ header determining univocally said radio channel type.

4. (currently amended): ~~Addressing~~ The addressing scheme according to claim 1, ~~characterized in that wherein~~ said IP-based protocol stack used in said IP-based Radio Access Network comprises UDP/IP combination, the UDP source port number in said ~~UDP-UDP~~ header determining univocally said radio channel type.

5. (currently amended): ~~The Addressing~~ addressing scheme according to claim 1, ~~characterized in that wherein~~ ~~the~~ parameters of a communication with said radio terminal are defined by an IP address, a UDP destination port number, and a communication identifier contained in the different layers of said IP-based protocol stack used in said Radio Access Network.

6. (currently amended): ~~A Base-base~~ station to be part of an IP-based Radio Access Network and communicating with other elements of said Radio Access Network by using an IP-based protocol stack, comprising:

the base station;

a plurality of radio terminals;

wherein said base station ~~being~~is adapted to communicate with ~~a~~the plurality of radio terminals having access to said Radio Access Network over at least two different types of radio channels, said base station ~~comprising~~comprises:

a channel type selector to determine the channel type on which data coming from said Radio Access Network have to be transmitted to one of said radio terminals,

wherein said channel ~~detector~~type selector ~~determining~~determines univocally said channel type by means of a port number ~~mentioned~~identified in the TCP or UDP header of a data packet received from said Radio Access Network and belonging to a communication with said radio terminal.

7. (currently amended): ~~Base~~The base station according to claim 6, ~~characterized in that~~wherein said channel selector further selects ~~a~~the port number to be used in said IP-based protocol stack to forward data to said Radio Access Network depending on the channel type on which said data are received from one of said radio terminals.

8. (currently amended): ~~Radio~~A Radio Network Controller to be part of an IP-based Radio Access Network and communicating with other elements of said Radio Access Network by using an IP-based protocol stack, comprising:

the Radio Network Controller;

a radio terminal;

wherein said Radio Network Controller ~~receiving~~receives from outside of the Radio Access Network data belonging to a communication with ~~a~~the radio terminal,

wherein said radio terminal ~~being~~is accessible over at least two different types of radio channels,

wherein said Radio Network Controller ~~comprising~~comprises:

a channel type selector to determine, according to said data belonging to said communication, the channel type on which a part of said data belonging to said communication have to be transmitted to said radio terminal,

wherein said channel ~~detector~~type selector ~~determining~~determines univocally, according to said channel type, a port number to be ~~mentioned~~identified in each TCP or UDP data packet exchanged over said Radio Access Network and belonging to said communication with said radio terminal.

9. (new): The addressing scheme according to claim 1, further comprising:

a plurality of port numbers wherein the plurality of port numbers are divided into groups of port numbers, each group being exclusively used for processing data to be transmitted or received over a predefined type of radio channel.

10. (new): The addressing scheme according to claim 9, wherein said plurality of port numbers are stored in a memory or a database which is accessible by the plurality of base stations and the at least one base station controller.